

oxide (CVO), and mixtures thereof are useful as the second active material.

In the Claims:

1. (Amended) An electrochemical cell, which comprises:

a) an anode;

b) a cathode of a first fluorinated carbon [having] of a [relatively high] first energy density [but] and a [relatively low] first rate capability and a second cathode active material of [having] a [relatively low] second energy density [but] and a [relatively high] second rate capability, wherein the first energy density of the first fluorinated carbon is greater than the second energy density while the first rate capability is less than the second rate capability of the second cathode active material; [and]

c) a cathode current collector comprising spaced apart major sides with the first fluorinated carbon positioned proximate one of the major sides and the second cathode active material proximate the other major side; and

[c)] d) an electrolyte comprising at least one solvent for activating the anode and the cathode, wherein the fluorinated carbon is characterized as having been synthesized from a fibrous carbonaceous material having sufficient spacing between graphite layers to substantially restrict expansion due to solvent co-intercalation.

8. (Amended) The electrochemical cell of claim 1 wherein the second cathode active material is selected from the group consisting of [SVO] silver vanadium oxide, [CSVO] copper silver vanadium oxide, V_2O_5 , MnO_2 , $LiCoO_2$, $LiNiO_2$, $LiMnO_2$, [CuO₂] CuO, TiS, [Cu₂S] CuS, FeS, FeS₂, [CVO] copper vanadium oxide, and mixtures thereof.

14. (Amended) The electrochemical cell of claim 1 wherein the anode is lithium, the first cathode active material is CF_x , the second cathode active material is SVO and the [first and second] cathode current collector is [collectors are] titanium or aluminum.

17. (Amended) The electrochemical cell of claim 16 wherein the first solvent is selected from the group consisting of tetrahydrofuran [(THF)], methyl acetate [(MA)], diglyme, triglyme, tetraglyme, dimethyl carbonate [(DMC)], 1,2-dimethoxyethane [(DME)], 1,2-diethoxyethane [(DEE)], 1-ethoxy,2-methoxyethane [(EME)], ethyl methyl carbonate, methyl propyl carbonate, ethyl propyl carbonate, diethyl carbonate, dipropyl carbonate, and mixtures thereof, and the second solvent is selected from the group consisting of propylene carbonate [(PC)], ethylene carbonate [(EC)], butylene carbonate, acetonitrile, dimethyl sulfoxide, dimethyl formamide, dimethyl acetamide, γ -valerolactone, γ -butyrolactone [(GBL)], N-methyl-pyrrolidinone [(NMP)], and mixtures thereof.

22. (Amended) A method for powering an implantable medical device, comprising the steps of:

- a) providing the medical device;
- b) providing an electrochemical cell comprising the steps of:
 - i) providing an anode of an alkali metal;
 - ii) providing a cathode of CF_x as a first cathode active material of [CF_x] a first energy density and a first rate capability sandwiched between first and second current collectors with a second cathode active material [having] of a [relatively low] second energy density [but] and a [relatively high] second rate capability, wherein the first energy density of the CF_x is greater than the second energy density while the first rate capability is less than the second rate capability of the second cathode active material [in comparison to the first cathode active material contacting the first and second current collectors opposite the first cathode active material]; and
 - iii) activating the anode and cathode with an electrolyte comprising at least one solvent, wherein the fluorinated carbon is characterized as having been synthesized from a fibrous carbonaceous material having sufficient spacing between graphite layers to substantially restrict expansion due to solvent co-intercalation; and

c) electrically connecting the electrochemical cell to the medical device.

28. (Amended) The method of claim 22 including selecting the second cathode active material from the group consisting of [SVO] silver vanadium oxide, [CSVO] copper silver vanadium oxide, V₂O₅, MnO₂, LiCoO₂, LiNiO₂, LiMnO₂, [CuO₂] CuO, TiS, [Cu₂S] CuS, FeS, FeS₂, [CVO] copper vanadium oxide, and mixtures thereof.